WHAT IS CLAIMED IS:

1. A method for identifying a compound which modulates the activity of prokaryotic elongation factor p (efp) comprising the steps of:

(a) contacting efp with a compound; and

(b) determining whether said compound modifies activity of efp.

2. The method of claim 1 wherein step (b) comprises determining whether said compound binds to efp.

3. The method of claim 2 wherein step (b) is determined by measuring the intrinsic fluorescence of efp and determining whether said intrinsic fluorescence is modulated by said binding.

4. The method of claim 3 wherein said intrinsic fluorescence of efp is measured as a function of the tryptophan residue(s) of efp.

5. The method of claim 4 wherein said fluorescence of efp is measured and compared to the fluorescence intensity of efp in the presence of the compound, wherein a decrease in fluorescence intensity indicates binding of efp.

6. The method of claim 1 further comprising step:

(c) determining whether said compound interfering with the function of efp is interfering with other protein(s) essential for the functioning of efp.

7. The method of claim 6 wherein said other protein essential for the functioning of efp is L16 protein.

8. The method of claim 2 wherein step (b) comprises a binding assay selected from the group consisting of gel electrophoresis, Western blot, filter binding, and scintillation proximity assay.

9. A method for identifying a compound which modulates the activity of prokaryotic elongation factor p (efp) comprising the steps of:

(a) contacting efp with a radiolabeled oxazolidinone;

(b) isolating or measuring said radiolabeled oxazolidinone bound to efp;

(c) contacting a compound with said radiolabeled oxazolidinone bound to efp; and

(d) determining whether said compound displaces said radiolabeled oxazolidinone from efp.

10. The method of claim 9 further comprising the step:

(e) measuring the displacement of the radiolabeled oxazolidinone from efp.

11. The method of claim 9 wherein step (d) is determined by comparatively measuring radioactivity of efp bound to said radiolabeled oxazolidinone with the radioactivity of efp in the presence of the compound.

12. The method of claim 10 wherein said radiolabeled oxazolidinone compound is linezolid or eperezolid.

13. A method for identifying a compound which modulates the activity of prokaryotic elongation factor p (efp) comprising the steps of:

(a) contacting efp with a composition comprising N-formylmethionyl-tRNA (fMet-tRNA), 30S subunit, 50S subunit, an mRNA containing an AUG sequence, and initiation factors 1, 2, and 3 to form a second composition;

(b) contacting said second composition with a compound; and

(c) determining whether said compound allows fMet-tRNA to bind to a complex formed through the interaction of efp, 30S subunit, 50S subunit, an mRNA containing an AUG sequence, and initiation factors 1, 2, and 3.

14. The method of claim 13 wherein said mRNA containing an AUG sequence consists essentially of rArUrG.

15. The method of any one of claims 1, 9 and 13 ~~wherein efp is isolated~~ from a natural source.

16. The method of claim 15 wherein said natural source is a prokaryotic organism.

17. The method of claim 16 wherein said prokaryotic organism is a bacteria.

18. The method of claim 17 wherein said bacteria is selected from the group consisting of *E. coli*, *S. aureus*, *S. pneumoniae*, *H. influenzae*, and an *Enterococcus* species.

19. A method for identifying a compound which modulates the activity of prokaryotic elongation factor p (efp) comprising the steps of:

(a) contacting a cell containing efp with a compound identified in claim 9 or 13; and

(b) determining whether said compound inhibits cell growth.

20. A method for identifying a compound which modulates the activity of prokaryotic elongation factor p (efp) comprising the steps of:

(a) contacting radiolabeled oxazolidinone bound to efp with a compound; and

(b) determining whether said compound displaces said radiolabeled oxazolidinone from efp.

21. A method for identifying a compound which modulates the activity of prokaryotic elongation factor p (efp) comprising the steps of:

(a) contacting a composition comprising efp, N-formylmethionyl-tRNA (fMet-tRNA), 30S subunit, 50S subunit, an mRNA containing an AUG sequence, and initiation factors 1, 2, and 3 with a compound; and

(b) determining whether said compound allows fMet-tRNA to bind to a complex formed through the interaction of efp, 30S subunit, 50S subunit, an mRNA containing an AUG sequence, and initiation factors 1, 2, and 3.

22. A method for identifying a compound which modulates the activity of prokaryotic elongation factor p (efp) comprising the steps of:

(a) contacting efp with prokaryotic 30S subunit to form a composition;

(b) contacting said composition with a compound; and

(c) determining whether said compound binds to efp in association with said 30S subunit or whether said compound interferes with the binding of efp and said 30S subunit.

23. The method of claim 22 wherein step (c) comprises determining whether said compound binds to said 30S subunit.

24. The method of claim 22 wherein step (c) comprises determining whether said compound binds to efp.

25. The method of claim 23 or 24 wherein step (c) is determined by measuring the intrinsic fluorescence of efp bound to said 30S subunit and determining whether said intrinsic fluorescence is modulated by said compound.

26. The method of claim 25 wherein said intrinsic fluorescence of efp is measured as a function of changes in the fluorescence of the tryptophan residue(s) of efp.

27. The method of claim 26 wherein said fluorescence of efp is measured and compared to the fluorescence intensity of efp in the presence of the compound, wherein a decrease in fluorescence intensity indicates binding of efp.

28. The method of claim 22 further comprising step (d), determining whether said compound interfering with the function of efp is interfering with other protein(s) essential for the functioning of efp.

29. The method of claim 28 wherein said other protein essential for the functioning of efp is L16 protein.

30. The method of claim 23 or 24 wherein step (c) comprises a binding assay selected from the group consisting of gel electrophoresis, Western blot, filter binding, and scintillation proximity assay.

31. A method for identifying a compound which modulates the activity of prokaryotic elongation factor p (efp) comprising the steps of:

(a) contacting efp with prokaryotic 30S subunit to form a composition;

(b) contacting said composition with a radiolabeled oxazolidinone;

(c) isolating or measuring said radiolabeled oxazolidinone bound to said efp and 30S subunit;

(d) contacting said radiolabeled oxazolidinone bound to said efp and 30S subunit with a compound; and

(e) determining whether said compound displaces said radiolabeled oxazolidinone from efp and said 30S subunit.

32. The method of claim 31 further comprising the step:

(f) measuring the displacement of the radiolabeled oxazolidinone from efp and said 30S subunit.

33. The method of claim 31 wherein step (d) is determined by comparatively measuring radioactivity of efp and 30S subunit bound to said radiolabeled oxazolidinone with radioactivity of efp and 30S subunit in the presence of the compound.

34. The method of claim 33 wherein said radiolabeled oxazolidinone compound in linezolid or eperezolid.

35. A method for identifying a compound which modulates the activity of prokaryotic elongation factor p (efp) comprising the steps of:

(a) contacting radiolabeled efp with prokaryotic 30S subunit to form a composition;

(b) contacting said composition with a compound;

(c) measuring whether said 30S subunit is bound to radiolabeled efp; and

(d) if said 30S subunit is not bound to efp, then select the compounds which interfered with said binding.

36. The method of embodiment 35 wherein step (c) comprises a binding assay selected from the group consisting of gel electrophoresis, Western blot, filter binding, and scintillation proximity assay.

37. A method for identifying a compound which modulates the activity of prokaryotic elongation factor p (efp) comprising the steps of:

(a) contacting efp with a composition comprising N-formylmethionyl-tRNA (fMet-tRNA), 30S subunit, an mRNA containing an AUG sequence, and initiation factors 1, 2, and 3 to form a second composition;

(b) contacting said second composition with said compound; and

(c) determining whether said compound allows fMet-tRNA to bind to a complex formed through the interaction of efp, 30S subunit, an mRNA containing the AUG sequence, and initiation factors 1, 2, and 3.

38. The method of claim 37 wherein said mRNA containing an AUG sequence consists essentially of rArUrG.

39. The method of any one of claims 22, 31, 35 or 37 wherein efp is isolated from a natural source.

40. The method of claim 39 wherein said natural source is a prokaryotic organism.

41. The method of claim 40 wherein said prokaryotic organism is a bacteria.

42. The method of claim 41 wherein said bacteria is selected from the group consisting of *E. coli*, *S. aureus*, *S. pneumoniae*, *H. influenzae*, and an *Enterococcus* species.

43. A method for identifying a compound which modulates the activity of prokaryotic elongation factor p (efp) comprising the steps of:

(a) contacting a cell comprising efp with a compound identified in claim 31, 35 or 37; and

(b) determining whether said compound inhibits cell growth.

44. A method for identifying a compound which modulates the activity of prokaryotic elongation factor p (efp) comprising the steps of:

(a) contacting efp with prokaryotic 30S subunit and a radiolabeled oxazolidinone;

(b) isolating or measuring said radiolabeled oxazolidinone bound to said efp and 30S subunit;

(c) contacting said radiolabeled oxazolidinone bound to said efp and 30S subunit with a compound; and

(d) determining whether said compound displaces said radiolabeled oxazolidinone from efp and said 30S subunit.

45. A method for identifying a compound which modulates the activity of prokaryotic elongation factor p (efp) comprising the steps of:

(a) contacting a composition comprising efp, N-formylmethionyl-tRNA (fMet-tRNA), 30S subunit, an mRNA containing an AUG sequence, and initiation factors 1, 2, and 3 with a compound; and

(b) determining whether said compound allows fMet-tRNA to bind to a complex formed through the interaction of efp, 30S subunit, an mRNA containing the AUG sequence, and initiation factors 1, 2, and 3.

46. A method for identifying a compound which modulates the activity of prokaryotic elongation factor p (efp) comprising the steps of:

(a) contacting efp with prokaryotic 50S subunit to form a composition;

(b) contacting said composition with a compound; and

(c) determining whether said compound binds to efp in association with said 50S subunit or whether said compound interferes with the binding of efp and said 50S subunit.

47. The method of claim 46 wherein step (c) comprises determining whether said compound binds to said 50S subunit.

48. The method of claim 46 wherein step (c) comprises determining whether said compound binds to efp.

49. The method of claim 47 or 48 wherein step (c) is determined by measuring the intrinsic fluorescence of efp bound to said 50S subunit and determining whether said intrinsic fluorescence is modulated by said compound.

50. The method of claim 49 wherein said intrinsic fluorescence of efp is measured as a function of changes in the fluorescence of the tryptophan residue(s) of efp.

51. The method of claim 50 wherein said fluorescence of efp is measured and compared to the fluorescence intensity of efp in the presence of the compound, wherein a decrease in fluorescence intensity indicates binding of efp.

52. The method of claim 46 further comprising step (d), determining whether said compound interfering with the function of efp is interfering with other protein(s) essential for the functioning of efp.

53. The method of claim 52 wherein said other protein essential for the functioning of efp is L16 protein.

54. The method of claim 47 or 48 wherein step (c) comprises a binding assay selected from the group consisting of gel electrophoresis, Western blot, filter binding, and scintillation proximity assay.

55. A method for identifying a compound which modulates the activity of prokaryotic elongation factor p (efp) comprising the steps of:

(a) contacting efp with prokaryotic 50S subunit to form a composition;

(b) contacting said composition with a radiolabeled oxazolidinone;

(c) isolating or measuring said radiolabeled oxazolidinone bound to said efp and 50S subunit;

(d) contacting said radiolabeled oxazolidinone bound to said efp and 50S subunit with a compound; and

(e) determining whether said compound displaces said radiolabeled oxazolidinone from efp and said 50S subunit.

56. The method of claim 55 further comprising the step:

(f) measuring the displacement of the radiolabeled oxazolidinone from efp and said 50S subunit.

57. The method of claim 55 wherein step (d) is determined by comparatively measuring radioactivity of efp and 50S subunit bound to said radiolabeled oxazolidinone with radioactivity of efp and 50S subunit in the presence of the compound.

58. The method of claim 57 wherein said radiolabeled oxazolidinone compound in linezolid or eperezolid.

59. A method for identifying a compound which modulates the activity of prokaryotic elongation factor p (efp) comprising the steps of:

(a) contacting radiolabeled efp with prokaryotic 50S subunit to form a composition;

(b) contacting said composition with a compound;

(c) measuring whether said 50S subunit is bound to radiolabeled efp; and

(d) if said 50S subunit is not bound to efp, then select the compounds which interfered with said binding.

60. The method of claim 59 wherein step (c) comprises a binding assay selected from the group consisting of gel electrophoresis, Western blot, filter binding, and scintillation proximity assay.

61. A method for identifying a compound which modulates the activity of prokaryotic elongation factor p (efp) comprising the steps of:

(a) contacting efp with a composition comprising N-formylmethionyl-tRNA (fMet-tRNA), 50S subunit, an mRNA containing an AUG sequence, and initiation factors 1, 2, and 3 to form a second composition;

(b) contacting said second composition with said compound; and

(c) determining whether said compound allows fMet-tRNA to bind to a complex formed through the interaction of efp, 50S subunit, an mRNA containing the AUG sequence, and initiation factors 1, 2, and 3.

62. The method of claim 61 wherein said mRNA containing an AUG sequence consists essentially of rArUrG.

63. The method of any one of claims 46, 55, 59 or 61 wherein efp is isolated from a natural source.

64. The method of claim 63 wherein said natural source is a prokaryotic organism.

65. The method of claim 64 wherein said prokaryotic organism is a bacteria.

66. The method of claim 65 wherein said bacteria is selected from the group consisting of *E. coli*, *S. aureus*, *S. pneumoniae*, *H. influenzae*, and an *Enterococcus* species.

67. A method for identifying a compound which modulates the activity of prokaryotic elongation factor p (efp) comprising the steps of:

(a) contacting a cell containing said efp with a compound identified in claim 55, 59 or 61; and

(b) determining whether said compound inhibits cell growth.

68. A method for identifying a compound which modulates the activity of prokaryotic elongation factor p (efp) comprising the steps of:

(a) contacting efp with prokaryotic 50S subunit and a radiolabeled oxazolidinone;

(b) isolating or measuring said radiolabeled oxazolidinone bound to said efp and 50S subunit;

(c) contacting said radiolabeled oxazolidinone bound to said efp and 50S subunit with a compound; and

(d) determining whether said compound displaces said radiolabeled oxazolidinone from efp and said 50S subunit.

69. A method for identifying a compound which modulates the activity of prokaryotic elongation factor p (efp) comprising the steps of:

(a) contacting a composition comprising efp, N-formylmethionyl-tRNA (fMet-tRNA), 50S subunit, an mRNA containing an AUG sequence, and initiation factors 1, 2, and 3 with a compound; and

(b) determining whether said compound allows fMet-tRNA to bind to a complex formed through the interaction of efp, 50S subunit, an mRNA containing the AUG sequence, and initiation factors 1, 2, and 3.

70. A method for identifying a compound which modulates the activity of prokaryotic elongation factor p (efp) comprising the steps of:

(a) contacting efp with prokaryotic 70S ribosome to form a composition;

(b) contacting said composition with a compound; and

(c) determining whether said compound binds to efp in association with said 70S ribosome or whether said compound interferes with the binding of efp and said 70S ribosome.

71. The method of claim 70 wherein step (c) comprises determining whether said compound binds to said 70S ribosome.

72. The method of claim 70 wherein step (c) comprises determining whether said compound binds to efp.

73. The method of claim 71 or 72 wherein step (c) is determined by measuring the intrinsic fluorescence of efp bound to said 70S ribosome and determining whether said intrinsic fluorescence is modulated by said compound.

74. The method of claim 73 wherein said intrinsic fluorescence of efp is measured as a function of changes in the fluorescence of the tryptophan residue(s) of efp.

75. The method of claim 74 wherein said fluorescence of efp is measured and compared to the fluorescence intensity of efp in the presence of the compound, wherein a decrease in fluorescence intensity indicates binding of efp.

76. The method of claim 70 further comprising step (d), determining whether said compound interfering with the function of efp is interfering with other protein(s) essential for the functioning of efp.

77. The method of claim 76 wherein said other protein essential for the functioning of efp is L16 protein.

78. The method of claim 71 or 72 wherein step (c) comprises a binding assay selected from the group consisting of gel electrophoresis, Western blot, filter binding, and scintillation proximity assay.

79. A method for identifying a compound which modulates the activity of prokaryotic elongation factor p (efp) comprising the steps of:

(a) contacting efp with prokaryotic 70S ribosome to form a composition;

(b) contacting said composition with a radiolabeled oxazolidinone;

(c) isolating or measuring said radiolabeled oxazolidinone bound to said efp and 70S ribosome;

(d) contacting said radiolabeled oxazolidinone bound to said efp and 70S ribosome with a compound; and

(e) determining whether said compound displaces said radiolabeled oxazolidinone from efp and said 70S ribosome.

80. The method of claim 79 further comprising the step:

(f) measuring the displacement of the radiolabeled oxazolidinone from efp and said 70S ribosome.

81. The method of claim 79 wherein step (d) is determined by comparatively measuring radioactivity of efp and 70S ribosome bound to said radiolabeled oxazolidinone with radioactivity of efp and 70S ribosome in the presence of the compound.

82. The method of claim 81 wherein said radiolabeled oxazolidinone compound in linezolid or eperezolid.

83. A method for identifying a compound which modulates the activity of prokaryotic elongation factor p (efp) comprising the steps of:

(a) contacting radiolabeled efp with prokaryotic 70S ribosome to form a composition;

(b) contacting said composition with a compound;

(c) measuring whether said 70S ribosome is bound to radiolabeled efp; and

(d) if said 70S ribosome is not bound to efp, then select the compounds which interfered with said binding.

84. The method of claim 83 wherein step (c) comprises a binding assay selected from the group consisting of gel electrophoresis, Western blot, filter binding, and scintillation proximity assay.

85. A method for identifying a compound which modulates the activity of prokaryotic elongation factor p (efp) comprising the steps of:

(a) contacting efp with a composition comprising N-formylmethionyl-tRNA (fMet-tRNA), 70S ribosome, an mRNA containing an AUG sequence, and initiation factors 1, 2, and 3 to form a second composition;

(b) contacting said second composition with said compound; and

(c) determining whether said compound allows fMet-tRNA to bind to a complex formed through the interaction of efp, 70S ribosome, an mRNA containing the AUG sequence, and initiation factors 1, 2, and 3.

86. The method of claim 85 wherein said mRNA containing an AUG sequence consists essentially of rArUrG.

87. The method of any one of claims 70, 79, 83 or 86 wherein efp is isolated from a natural source.

88. The method of claim 87 wherein said natural source is a prokaryotic organism.

89. The method of claim 88 wherein said prokaryotic organism is a bacteria.

90. The method of claim 89 wherein said bacteria is selected from the group consisting of *E. coli*, *S. aureus*, *S. pneumoniae*, *H. influenzae*, and an *Enterococcus* species.

91. A method for identifying a compound which modulates the activity of prokaryotic elongation factor p (efp) comprising the steps of:

(a) contacting a cell comprising efp with a compound identified in claim 79, 83 or 85; and

(b) determining whether said compound inhibits cell growth.

92. A method for identifying a compound which modulates the activity of prokaryotic elongation factor p (efp) comprising the steps of:

(a) contacting efp with 70S ribosome and a radiolabeled oxazolidinone;

(b) isolating or measuring said radiolabeled oxazolidinone bound to said efp and 70S ribosome;

(c) contacting said radiolabeled oxazolidinone bound to said efp and 70S ribosome with a compound; and

(d) determining whether said compound displaces said radiolabeled oxazolidinone from efp and said 70S ribosome.

93. A method for identifying a compound which modulates the activity of prokaryotic elongation factor p (efp) comprising the steps of:

(a) contacting a composition comprising efp, N-formylmethionyl-tRNA (fMet-tRNA), 70S ribosome, an mRNA containing an AUG sequence, and initiation factors 1, 2, and 3 with a compound; and

(b) determining whether said compound allows fMet-tRNA to bind to a complex formed through the interaction of efp, 70S ribosome, an mRNA containing the AUG sequence, and initiation factors 1, 2, and 3.

94. A method for identifying a compound which modulates the activity of prokaryotic elongation factor p (efp) comprising the steps of:

(a) contacting efp with a composition comprising either 50S subunit or 70S ribosome, a tRNA fragment comprising CACCA-radiolabeled amino acid, and a peptide bond donor to form a second composition;

(b) contacting said second composition with a compound; and

(c) determining whether said compound inhibits the first peptide bond reaction.

95. The method of claim 94 wherein the peptide bond donor is either puromycin or a puromycin analog.

96. The method of claim 94 wherein the peptide bond donor is an amino acyl-tRNA or an analog of amino acyl-tRNA.

97. A method for identifying a compound which inhibits the first peptide bond reaction of a complex formed through the interaction of efp, 50S subunit or 70S ribosome, a tRNA fragment comprising CACCA-radiolabeled amino acid, and a peptide bond donor comprising the steps of:

(a) contacting efp with a composition comprising 50S subunit or 70S ribosome, a tRNA fragment comprising CACCA-radiolabeled amino acid, and a peptide bond donor to form a second composition;

(b) contacting said second composition with a compound; and

(c) determining whether said compounds inhibits the first peptide bond reaction.

98. The method of claim 97 wherein said peptide bond donor is either puromycin or a puromycin analog.

99. The method of claim 97 wherein said peptide bond donor is an amino acyl-tRNA or an analog of amino acyl-tRNA.

100. The method of claims 94 or 97 wherein said efp is isolated from a natural source.

101. The method of claim 100 wherein said natural source is a prokaryotic organism.

102. The method of claim 101 wherein said prokaryotic organism is bacteria.

103. The method of claim 102 wherein said bacteria is selected from the group consisting of *E. coli*, *S. aureus*, *S. pneumoniae*, *H. influenzae*, and an *Enterococcus* species.

104. A method for identifying a compound which modulates the activity of prokaryotic elongation factor p (efp) comprising the steps of:

(a) contacting efp with a composition comprising N-formylmethionyl-tRNA (fMet-tRNA), 30S subunit, 50S subunit, an mRNA containing an AUG sequence, and initiation factors 1, 2, and 3, and a peptide bond donor to form a second composition;

(b) contacting said second composition with a compound; and

(c) determining whether said compound inhibits the first peptide bond reaction formed by the complex containing N-formylmethionyl-tRNA (fMet-tRNA), 30S subunit, 50S subunit, an mRNA containing an AUG sequence, and initiation factors 1, 2, and 3, peptide bond donor and efp.

105. The method of claim 104 wherein the peptide bond donor is either puromycin or a puromycin analog.

106. The method of claim 105 wherein said mRNA sequence is rArUrG.

107. The method of claim 106 wherein the peptide bond donor is an amino acyl-tRNA or an analog of amino acyl-tRNA.

108. The method of claim 107 wherein said mRNA sequence is rArUrG.

109. A method for identifying a compound which inhibits the first peptide bond reaction of a complex formed through the interaction of efp, N-formylmethionyl-tRNA (fMet-tRNA), 30S subunit, 50S subunit, an mRNA containing an AUG sequence, and initiation factors 1, 2, and 3, and a peptide bond donor comprising the steps of:

(a) contacting efp with a composition comprising fMet-tRNA), 30S subunit, 50S subunit, an mRNA containing an AUG sequence, and initiation factors 1, 2, and 3, and a peptide bond donor to form a second composition;

(b) contacting said second composition with a compound; and

(c) determining whether said compound inhibits the first peptide bond reaction of the complex of fMet-tRNA, 30S subunit, 50S subunit, an mRNA containing an AUG sequence, initiation factors 1, 2, and 3, peptide bond donor, and efp.

110. The method of claim 109 wherein said peptide bond donor is either puromycin or a puromycin analog.

111. The method of claim 110 wherein said mRNA sequence is rArUrG.

112. The method of claim 109 wherein said peptide bond donor is an amino acyl-tRNA or an analog of amino acyl-tRNA.

113. The method of claim 112 wherein said mRNA sequence is rArUrG.

114. The method of claims 94, 97, 104 or 109 wherein said efp is isolated from a natural source.

115. The method of claim 114 wherein said natural source is a prokaryotic organism.

116. The method of claim 115 wherein said prokaryotic organism is bacteria.

117. The method of claim 116 wherein said bacteria is selected from the group consisting of *E. coli*, *S. aureus*, *S. pneumoniae*, *H. influenzae*, and an *Enterococcus* species.

118. A method for identifying a compound which modulates the activity of prokaryotic elongation factor p (efp) comprising the steps of:

(a) contacting a cell containing said efp with a compound identified in claim 94, 97, 104 or 109; and

(b) determining whether said compound inhibits cell growth.

119. A method for identifying a compound which modulates the activity of prokaryotic elongation factor p (efp) comprising the steps of:

(a) contacting a cell or composition containing efp with a detectably labeled oxazolidinone compound known to bind efp under conditions whereby efp forms a complex with said oxazolidinone compound;

(b) contacting said composition or cell with an unlabeled compound; and

(c) determining whether said unlabeled compound displaces said labeled oxazolidinone compound from said complex.

120. The method of claim 119 wherein said displacement in step (c) is determined by comparing the amount of said detectable label in said cell or composition prior to addition of said unlabeled compound with the amount of said detectable label in said cell or composition after addition of said unlabeled compound, wherein a decrease in detectable label indicates said compound displaces said oxazolidinone compound from said complex.

121. The method of claim 120 wherein said detectable label is a radiolabel or a fluorescent label.

122. The method of claim 121 wherein said oxazolidinone compound is linezolid or eperezolid.

123. A method for identifying a compound which modulates the activity of prokaryotic elongation factor p (efp) comprising the steps of:

(a) contacting a cell or composition containing efp and a detectably labeled oxazolidinone compound known to bind efp under conditions whereby efp forms a complex with said oxazolidinone compound with an unlabeled compound; and

(b) determining whether said unlabeled compound displaces said labeled oxazolidinone compound from said complex.

124. A method for identifying a compound which modulates the activity of prokaryotic elongation factor p (efp) but not eukaryotic eIF5A comprising the steps of:

(a) determining whether said compound modulates the activity of prokaryotic efp by the method of any one of claims 1, 9, 13, 22, 31, 35, 37, 46, 55, 59, 61, 67, 70, 79, 83, 85, 94, 97, 104 or 119;

(b) contacting eIF5A with a composition comprising methionyl-tRNA (Met-tRNA), 80S ribosome, an mRNA containing an AUG sequence, initiation factors eIF-2, eIF-3, eIF-5, eIF-4C, eIF-4D, and a peptide bond donor to form a second composition;

(c) contacting said second composition with a compound; and

(d) determining whether said compound inhibits the first peptide bond reaction of a complex formed through the interaction of eIF5A, Met-tRNA, 80S ribosome, an mRNA containing an AUG sequence, and initiation factors eIF-2, eIF-3, eIF-5, eIF-4C, eIF-4D.

125. The method of claim 124 wherein said peptide bond donor is either puromycin or a puromycin analog.

126. The method of claim 125 wherein said mRNA sequence is rArUrG.

127. The method of claim 124 wherein said peptide bond donor is an amino acyl-tRNA or an analog of amino acyl-tRNA.

128. The method of claim 127 wherein said mRNA sequence is rArUrG.

129. The method of claim 124 wherein efp is isolated from a natural source.

130. The method of claim 129 wherein said natural source is a eukaryotic organism.

131. The method of claim 130 wherein said eukaryotic organism is a mammal.

132. A method for identifying a compound which modulates the activity of prokaryotic elongation factor p (efp) but not eukaryotic eIF5A comprising the steps of:

(a) determining whether said compound modulates the activity of prokaryotic efp by the method of any one of claims 1, 9, 13, 22, 31, 35, 37, 46, 55, 59, 61, 67, 70, 79, 83, 85, 94, 97, 104 or 119;

(b) contacting a composition comprising eIF5A, methionyl-tRNA (Met-tRNA), 80S ribosome, an mRNA containing an AUG sequence, initiation factors eIF-2, eIF-3, eIF-5, eIF-4C, eIF-4D, and a peptide bond donor with a compound; and

(c) determining whether said compound inhibits the first peptide bond reaction of a complex formed through the interaction of eIF5A, Met-tRNA, 80S ribosome, an mRNA containing an AUG sequence, and initiation factors eIF-2, eIF-3, eIF-5, eIF-4C, eIF-4D.

133. A method of modulating the activity of prokaryotic efp comprising contacting efp or a cell or cell preparation containing efp with an oxazolidinone compound.

134. A method of modulating the activity of 30S subunit comprising contacting 30S subunit in association with efp with an oxazolidinone compound.

135. A method of claim 134 wherein said 30S subunit in association with efp is in a cell or cell preparation.

136. A method of modulating the activity of procaryotic 50S subunit comprising contacting said 50S subunit in association with efp with an oxazolidinone compound.

137. A method of claim 136 wherein said 50S subunit in association with efp is in a cell or cell preparation.

138. A method of modulating the activity of 70S ribosome comprising contacting said 70S ribosome in association with efp with an oxazolidinone compound.

139. A method of claim 138 wherein said 70S ribosome in association with efp is in a cell or cell preparation.

140. A method of modulating the activity of L16 protein comprising contacting said L16 protein in association with efp with an oxazolidinone compound.

141. A method of claim 140 wherein said L16 protein in association with efp is in a cell or cell preparation.